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Coal production in	Daily Production (tons)	Annual Production (million tons)
1954	6,358	1.940
1955	5,446	1.666
1956	4,558	1.390
1957	4,000	1.220
1958	3,508	1.070
1959	3,116	0.950
1960	1,311	0.400
1961	985	0.300

It can be assumed that the actual production of the Saxon coal mining area will develop approximately as indicated in the above schedule unless the deep drilling, which was started last year in the Zwickau and Oelsnitz district, results in the finding of new deposits. According to experts there is a strong possibility of finding new hard coal deposits beneath the thick porphyritic strata of the Saxon Permian.

3. Hard coal production since 1936 in the Soviet Zone of Germany has been as follows:

1936 - 3,523,000 tons	1942 - 3,000,000 tons	1947 - 2,753,000 tons
1937 - 3,800,000 "	1943 - 2,917,000 "	1948 - 2,848,000 "
1938 - 3,513,000 "	1944 - 2,900,000 "	1949 - 3,019,000 "
1940 - 3,300,000 "	1945 - 1,900,000 "	1950 - 2,752,000 "
1941 - 3,100,000 "	1946 - 2,513,000 "	

The quotas set by the planning committees have never been reached. The 1950 quota was 3,252,000 tons, but the actual production was only 2,752,700 tons or 84.6 percent of the quota. The quota for the first half year of 1951 was 1,673,600 tons but the actual production was only 1,591,750 tons or 95.1 percent of the quota. The factors responsible for the inadequate production of the Saxon coal district have been previously reported and can be summarized as follows: irregular geological deposits, considerable impurities of veins caused by layers of shale and dispersed beddings (Zwischenmittel und Verwachsungen), considerable exhaustion of coal resources, inadequate mechanization, inadequate labor supply, negligence in the training of miners, and inadequate wages. Leaky pipes, from which screws have been missing for years, cause a reduction of atmospheric pressure resulting in a decline of working efficiency. Most of the pneumatic hammers are urgently in need of repair or renovation. There is a shortage of mine cars, chutes and cables, and there are not enough pumps to keep the levels free of water. In 1951, only 40 percent of the existing coal cutting machines were being used, and even these machines were used only for short intervals as there was a shortage of electric cables. The track installations are worn out and may cause accidents. Large machinery cannot be used in the Saxon district because of geological mining conditions. The blasting procedure recently propagandized by the administration cannot be carried out on a large scale because suitable explosives are scarce in the Soviet Zone of Germany. The lack of trained miners has been the most critical problem. In late 1950, there was a demand, in excess of the labor supply, for at least 1,000 miners in the Zwickau district. Until 1 September 1950, wages for miners were considerably lower than in other branches of industry. When the "Decree on Wage Improvement for Workers and Office Employees in Nationalized and Similar Enterprises" was issued on 17 August 1950, the wages for miners were increased as much as 50 percent and thus rank first among the wages of skilled workers.

4. In 1936, the four German zones of the Potsdam Agreement produced the following amount of hard coal:

British and American Zones	137.0 million tons	-	88.1 percent
French Zone (Saar district)	14.4 million tons	-	9.3 percent
Soviet Zone	3.5 million tons	-	2.3 percent
Total of the four zones	154.9 million tons	-	100 percent

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These figures do not include the production of the Upper Silesian hard coal mines now under Polish administration. The Upper Silesian hard coal production in 1936 was approximately 22 million tons. Although only 3.5 million tons of hard coal were produced in the Soviet Zone of Germany in 1936, the hard coal requirements in that year were 16.6 million tons. The large coal deficit in the Soviet Zone could formerly be balanced by the surplus coal produced in the West German and East German hard coal districts. The Upper Silesian hard coal mines contributed 9 million tons and the Ruhr district 4 million tons, making a total of 16.5 million tons of coal available.

5. In 1949 and 1950, the Soviet Zone produced and imported the following amounts of hard coal:

	1949 (million tons)	1950 (million tons)
Soviet Zone coal production	3	2.8
Coal imports from Poland	3.6	3.6
Coke imports from Poland (computed in tons of coal)	1.1	1.15
Coke imports from Czechoslovakia (computed in tons of coal)	0.6	0.6
Coal supplies from the U.S.S.R., including coke	0.2	0.2
Coal supplies from West Germany, including coke	unknown	0.1
Total	8.5	8.45

The present hard coal supplies in the Soviet Zone are 8 million tons below the 1936 level.

6. This coal shortage affects the entire economic system of the Soviet Zone. There are substantial brown coal deposits in the Soviet Zone but they cannot offset the high requirements for coal. Since brown coal averages only 2,200 small calories per kg it has much less heating value than hard coal. The Soviet Zone has attempted to bridge this coal deficit by emergency measures compelling coal consuming industries to use coal substitutes to a great extent. In the long run, however, such economy is wasteful and leads to an unprofitable utilization of substitute fuel as well as of the production equipment built for coal-firing. By order of the Soviet Zone Government, most consumers were forced to use brown coal, especially in briquette form, instead of hard coal. The allocation system has completely eliminated the use of hard coal for home heating. Industries were forced to convert their equipment from hard coal-firing to brown coal-firing. This extensive conversion of equipment has not been completed to date and has created additional technical and economic problems, especially in the machine and apparatus construction industries. This conversion has resulted in reduced production by the industries and the public utilities of the Soviet Zone. All locomotives were converted from the use of hard coal to brown coal briquettes. This conversion has proved to be particularly unprofitable. The ratio of heating value between hard coal and brown coal briquettes is 1.5 to 1. However, because of the low heat utilization of brown coal briquettes used to operate locomotives, two or more tons of brown coal briquettes are required to equal one ton of hard coal, resulting in a waste of at least 33 percent. There are some branches of industry and public utilities where hard coal cannot be replaced by brown coal. This applies particularly to the entire metallurgical industry, especially the iron producing industries, and also to certain chemical industries such as the lime and carbide producing industries, and to the gasworks. The Soviet Zone hard coal production and the hard coal and coke imports are reserved for these enterprises.

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Brown coal balance and total coal balance.

7. The Soviet Zone brown coal deposits comprised 50.5 percent of the total deposits of Germany in 1937. The significance of the Central German brown coal deposits was increased by the loss of the territories east of the Oder-Neisse line. These territories formerly included 17.1 percent of the utilizable brown coal deposits of the former German Reich. The Central German brown coal deposits represent 60.9 percent of the total resources of the four zones. There are three large German brown coal districts, one located east of the Elbe River, one in Central Germany and one on the Rhine River. The first two districts are almost entirely within the Soviet Zone of Germany. Of the coal deposits of all four zones where open pit mining is possible, 85.7 percent are located in the Soviet Zone of Germany. Open pit mining is economically more profitable than underground mining. The Central German brown coal can almost always be briquetted and can be carbonized at low temperatures. The brown coal produced in the district east of the Elbe River can be briquetted but can be used only to a small extent for low temperature carbonization. The brown coal district on the Oder River, half of which is located in the Polish-controlled German territories, has only sporadic coal occurrences which are not of great importance. The Soviet Zone brown coal deposits are shown in the following table:

District or Area	<u>Deposits to Be Worked by Open Pit Mining</u>			<u>Deposits to Be Worked by Underground Mining</u>			Grand Total
	Known Deposits	Probable Additional Deposits	(million tons) Total	Known Deposits	Probable Additional Deposits	Total	
Braunschweig MAGDEBURG (H 53/Y 60)	767.3	105.2	872.5	258.4	719.2	977.6	1,850.1
Halle Leipzig (H 52/E 21)	6,795.5	258.5	7,054.0	1,942.7	568.3	2,511.0	9,565.0
Lausitz (H 52/E 93)	6,995.0	298.9	7,235.7	2,990.8	6,147.1	9,137.9	16,373.6
North German Individual Occurrences	13.4	2.5	15.9	7.8	813.5	821.3	837.2
Total Soviet Zone of Germany	14,513.0	665.1	15,178.1	5,199.7	8,248.1	13,447.8	28,625.9

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8. Although all Soviet Zone hard coal deposits are under German ownership, twelve of the one hundred Soviet Zone brown coal mines were transferred to Soviet ownership in 1946. The production of these twelve mines was 31.6 percent of the total Soviet Zone output in 1948, 33.1 percent in 1949, and about 35 percent or 43 million tons in 1950. These same twelve brown coal mines produced only 19.4 percent of the total brown coal output of the Soviet Zone in 1943. Therefore, it is believed that the brown coal mines taken over by the Soviets in 1946 had not been dismantled, or were only partially dismantled, and that the operation of these mines was put on a more efficient basis at a much faster rate than the brown coal mines which have remained under German ownership.
9. The dismantling of machinery and equipment by the Soviets drastically reduced the Soviet Zone brown coal mining capacity. As a result of this dismantling, the production of the brown coal mining industry fell from about 165 million tons per year during 1943 and 1944 to about 100 million tons per year during the period from 1945 to 1948. The following amounts of important large equipment were available in 1949:

Shovel dredgers (Schaufelbagger)	only 55 percent of the 1938 stocks
Mobile electric engines (Elektrische Lokomobilen)	" 66 " " " " "
Bucket excavators	" 69 " " " " "
Coal cars	" 70 " " " " "
Briquette presses	" 71 " " " " "
Drying installations	" 80 " " " " "
Power shovels (Loeffelbagger)	" 88 " " " " "
Mobile steam engines	" 92 " " " " "

The increasing obsolescence of the mechanical equipment is also partially responsible for the reduced capacity of the mining industry. It was found that the existing excavators have an average age of 24 years, the waste-removal cars of 22 years, the mobile electric engines of 21.4 years, and the mobile steam engines of 28.4 years. There were no replacements of large equipment from 1939 to 1949. Thus, there is a critical shortage in the brown coal mining industry of all kinds of equipment.

10. To date, however, the Soviet Zone brown coal mining industry has always succeeded in meeting their quotas and, to some extent, has even exceeded the quotas. As shown in the following table, the wartime record brown coal production has not yet been achieved.

<u>Year</u>	<u>Total Production</u>	<u>Produced by German Enterprises</u>	<u>Produced by Soviet Enterprises</u>
1936	100.6	100.6	
1937	112.0	112.0	
1938	119.2	119.2	
1939	131.9	131.9	
1940	143.1	143.1	
1941	150.4	150.4	
1942	157.8	157.8	
1943	164.3	164.3	
1944	155.2	155.2	
1945	85.2	85.2	
1946	108.6	108.6	
1947	101.7	70.8	30.9
1948	111.0	76.4	34.6
1949	124.0	83.2	40.8
1950	135.0	92.0	43.0
1955	205.0 (scheduled production)		

The 1943 production of 164.3 million tons exceeds the 1950 production by about 30 million tons.

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11. As of 1950, the Soviet Zone production of low temperature brown coal coke had not yet reached the wartime peak production of 1943 to 1944. The Soviet Zone produced the following amount of low temperature coke:

2.5 million tons in 1938	3.5 million tons in 1943
2.7 " " " 1939	3.0 " " " 1949
3.7 " " " 1940	3.0 " " " 1950
4.2 " " " 1941	4.0 " " " 1955 (scheduled production)
4.8 " " " 1942	
5.5 " " " 1943	
5.1 " " " 1944	
- " " " 1945	
3.6 " " " 1946	
3.4 " " " 1947	

12. The production of brown coal in the Soviet Zone shows a rising trend despite the inadequate mechanical equipment, because a relatively large number of additional workers, including many women, have been employed. In 1938, only 35,000 workers were employed in the Soviet Zone brown coal mining industry. This number increased to about 123,000 by 1950 and included more than 12,000 women. The production costs were considerably increased by using additional manpower rather than machinery. The 1948 production costs per ton of brown coal were estimated to be about 200 percent of the 1938 costs.
13. There are 90 brown coal briquetting factories in the Soviet Zone. In 1946, seventeen of these briquetting factories were transferred to Soviet ownership. In 1949, the 17 SAG briquetting factories produced 40.5 percent of the total Soviet Zone production of brown coal briquettes. In 1943, these same 17 factories produced only 30 percent of the total brown coal briquette production. In 1950, about 84 million tons or 62.2 percent of the total crude brown coal production of 135 million tons were processed in the briquetting factories. On the average, 2.3 tons of crude brown coal were used for each ton of briquettes. The 1950 production of brown coal briquettes, therefore, amounted to 36.5 million tons. The Soviet Zone achieved its maximum briquette production in 1943, when 43.8 million tons were produced. The following is a list showing the Soviet Zone production of brown coal briquettes:

<u>Year</u>	<u>Total Production</u>	<u>Produced by</u> <u>German Enterprises</u>	<u>Produced by</u> <u>Soviet Enterprises</u>
	(million tons)		
1936	24.0	24.0	
1937	24.0	24.0	
1938	30.0	30.0	
1939	33.1	33.1	
1940	36.8	36.8	
1941	38.2	38.2	
1942	40.5	40.5	
1943	43.8	43.8	
1944	41.8	41.8	
1945	-	-	
1946	29.2	-	29.2
1947	26.8	16.2	10.6
1948	30.0	18.1	11.9
1949	34.5	20.7	13.8
1950	36.5	22.7	13.8
1955	56.0 (scheduled production)		

Briquette production, like brown coal production, has been reduced because of Soviet dismantling and the obsolescence of mechanical equipment. Production costs have also doubled compared with prewar costs.

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14. In converting crude brown coal and brown coal briquettes to hard coal equivalents, one ton of brown coal briquettes is assumed to equal 0.64 tons of hard coal and one ton of crude brown coal is assumed to equal 0.28 tons of hard coal. In converting crude brown coal to brown coal briquettes 2.3 tons of crude brown coal are assumed to be equivalent to 1 ton of brown coal briquettes. The 1936 coal production and consumption in the Soviet Zone of Germany, excluding the Soviet Sector of Berlin, was as follows:

	<u>Crude Brown Coal</u>	<u>Brown Coal Briquettes</u>	<u>Hard Coal</u> (million tons)	<u>Hard Coal Equivalents</u>		<u>Total Hard Coal</u>
				<u>Crude Brown Coal</u>	<u>Brown Coal Briquettes</u>	
<u>Production</u>	100.6		3.5	28.17		31.67
<u>Consumption</u>						
<u>Briquetting</u>						
<u>Factories</u>	55.2 *					
<u>Industry</u>	31.6	6.9	6.3	8.85	4.42	19.56
<u>Public</u>						
<u>Utilities</u>	13.4	0.4	2.4	3.75	0.26	6.41
<u>Home heating,</u>						
<u>agriculture and</u>						
<u>small business</u>	0.3	5.0	4.0	0.00	3.20	7.28
<u>Railroads and</u>						
<u>Shipping</u>	0.1	0.1	3.9	0.03	0.06	3.99
<u>Total Soviet Zone</u>						
<u>Consumption</u>	100.6	12.4	16.6	12.71	7.94	37.25
<u>Export</u>		11.6			7.42	7.42
<u>Total</u>	100.6	24.0	16.6	12.71	15.36	44.67
<u>Balance</u>	--	--	- 13.1	(+ 0.1)	- 13.0

* The briquetting factories in the Soviet Zone consumed 55.2 million tons of crude brown coal from which was produced 24 million tons of briquettes. As indicated in the table, 12.4 million tons of these briquettes were consumed in the Soviet Zone and the remaining 11.6 million tons were exported. The deficit of 13 million tons was balanced by imports of 9 million tons from Upper Silesia and 4 million tons from the Ruhr district.

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15. In 1950, the Soviet Zone coal consumption differed considerably from that of 1936 because of the small imports of hard coal. In 1950, the Soviet Zone supplies of coal were as follows:

Crude brown coal produced in the Soviet Zone	135.0 million tons
Crude brown coal imported from the area east of the Oder/Neisse	3.7 " "
Total crude brown coal	138.7 " "
Crude brown coal consumed by the briquetting factories in the Soviet Zone	84.0
Total crude brown coal available for consumption in the Soviet Zone	54.7 " "

From the 84 million tons of crude brown coal consumed by the briquetting factories, 36.52 tons of brown coal briquettes were produced. Of this total, the following amounts of brown coal briquettes were exported:

East Berlin	1.2 million tons
West Germany	.5 " "
West Berlin	.6 " "
Austria, Denmark and other countries	.3 " "
Total exported	2.6 " "

A total of 33.92 million tons of brown coal briquettes were available for consumption in the Soviet Zone. The increase of briquette consumption in the Soviet Zone from 12.4 million tons in 1936 to 33.92 million tons in 1950 reflects the critical shortage of hard coal. Because of this shortage of hard coal, many consumers were forced to use brown coal briquettes to fire equipment built exclusively for hard coal-firing. The heating value of brown coal briquettes consumed by such equipment is considerably lower due to the greater ash formation and other factors. It is therefore believed that the ratio between the heating value of brown coal briquettes used in this manner and the heating value of hard coal would be 2 to 1, rather than 1 to 0.64. Another factor which would increase the amount of coal required in 1950 is the greatly increased wastage of coal caused by the inferior mechanical efficiency of the old machinery which must still be used because of the dismantling of much of the modern machinery. The shortage of coal for industrial use was probably offset, in part at least, by curtailment of coal allocations for home heating, small businesses and agriculture.

16. It is not believed that the coal problem is an insurmountable impediment to the total production of the Soviet Zone because the hard coal shortage can be balanced by the use of brown coal, and mining difficulties can be overcome by the assignment of additional labor for the brown coal mines. The resulting increase of 100 percent and more in the production costs will not decisively affect the centralized planned economy of the Soviet Zone of Germany because such costs can be largely offset by a corresponding lowering of living standards.
17. In 1955, the brown coal production is scheduled to be 205 million tons and the briquette production is scheduled to be 56 million tons. To reach these targets, measures for increased mechanization were ordered in the "Decree for the Improvement of the Situation of the Miners, the Technical-Engineers, and Commercial Personnel, and of the Production Conditions in the Mining Industry of the Soviet Zone of Germany", issued on 10 August 1950. There is only a slight possibility of achieving the mechanization ordered, because new machines are not only required to increase capacity but also to replace existing equipment. The Main Coal Administration in Berlin estimated that the following heavy equipment would be required during the Five-Year Plan: 36 bucket excavators, 67 paddle-wheel dredgers and power shovels (Schaufelrad- und Loeffelbagger) 15 dump trucks (Absetzer), and 5 conveying bridges for open pit coal mining (Abraumfoerderbruecke), in addition to electric locomotives, Diesel locomotives, cars, and numerous items of small equipment. An annual average increase of 3.9 million tons would be required to reach

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the 1955 quota for brown coal briquette production. The average annual increase of briquette production was only 1.8 million tons from 1946 to 1950 and only 2.5 million tons from 1949 to 1950. This rate of increase must be almost doubled in order to meet the demands of the Five-Year Plan. Under the Five-Year Plan four new briquetting factories with an annual production of 7.6 million tons will be built, and four dismantled briquetting factories with an annual production of 3.5 million tons will be restored. However, considerable new investments will also be necessary in the coming years because of the worn-out machines of the existing briquetting factories. As the procurement of the required mechanical equipment is problematic, it is doubtful whether the production target of the Five-Year Plan will be reached. The Soviet Zone brown coal production to date indicates that the targets of the Five-Year Plan could be achieved by the assignment of additional labor to the mines.

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